

**REPRODUCTION IN PRICKLY FOREST SKINKS, *GNYPETOSCINCUS QUEENSLANDIAE*.** *Memoirs of the Queensland Museum* 49(2): 732. 2004:- *Gnypetoscincus queenslandiae* is a rainforest endemic skink abundant in the Wet Tropics of Australia. This species is the subject of extensive studies on both the current and historical effects of fragmentation (Sumner et al., 1999; Cunningham & Moritz, 1998). A more complete knowledge of its ecology is vital when looking at possible effects of fragmentation and determining management strategies. Previous work on the reproductive biology of this species from museum specimens suggested that *G. queenslandiae* give birth between February and April with a clutch size of 2-5 (Cunningham, 1993). Here we look at some aspects of reproduction in live animals.

Eleven gravid female prickly forest skinks were collected from 3 sites on the Atherton Tableland: 4 from Whiteing Rd (145°36'E, 17°34'N), 4 from Sutties Gap Rd (145°34'E, 17°37'N) and 3 from Mt Father Clancy (145°38'E, 17°36'N) — the first a rainforest fragment, the latter two within continuous forest. The skinks were collected late November 1996 and maintained in the lab until parturition. They were housed in separate rectangular 3.5L plastic containers in a 26°C constant temperature room. The containers had approximately 5cm of soil, a rectangle of plastic as cover, and a water dish in which the lizard could immerse itself if disturbed. Soil was maintained at a moist to wet consistency. Lizards were fed cockroaches and mealworms thrice weekly and were checked daily to determine whether they had given birth. They were weighed weekly and at parturition. On discovery, neonates were weighed, measured and placed in separate containers. They were fed thrice weekly, watered daily, and weighed and measured weekly until approximately 5 weeks of age. They were then euthanased and sexed via dissection. Average size of both neonates and mothers were calculated as well as total clutch mass. Statistical analyses were done using STATISTICA™ software.

Females were between 74 and 81mm SVL on capture and weighed from 9.1 to 14.2g (Table 1). All females gave birth between 8-18 January. Thirty-four offspring were born to 11 mothers, with clutch sizes 1-5, and an average of 3.1 (Table 1).

TABLE 1. Clutch data for gravid *Gnypetoscincus queenslandiae*, with number of individuals (No.), minimum (Min.), maximum (Max.), mean and standard error (SE) for each character.

Character	No.	Min.	Max.	Mean	SE
Snout-vent length (mm)	81	74	81	76.66	0.68
Postpartum mass (g)	81	6.67	9.26	7.96	0.26
Clutch size	11	1	5	3.09	0.34
Total clutch mass (g)	9	0.46	2.95	1.76	0.23

Neonate morphology is summarised in Table 2.

Twenty-three neonates could be sexed with confidence: 13 females and 10 males. There was no evidence of sexual dimorphism in *G. queenslandiae* neonates, despite significant differences in adult morphology (Sumner et al., 1999).

The parturition dates of this study are consistent with Cunningham (1993), who reported gravid females from the Atherton Tableland collected in September, November and December, but not in February (no individuals collected in January). The early parturition date found here may be due to the captive condition of the lizards. The births were in quick succession once the first individual had given birth. Hormonal cues might enhance synchronous parturition.

Cunningham (1993) and Sumner et al., (1999) both found a skewed sex ratio in *G. queenslandiae*. Slightly more female neonates were identified in this study, however the difference is not significant, suggesting that postnatal effects may account for the uneven sex-ratio in these previous studies.

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#### Literature Cited

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TABLE 2. Morphological measurements of neonate *Gnypetoscincus queenslandiae*, with number of individuals (No.), minimum (Min.), maximum (Max.), mean and standard error (SE) for each character.

Character	No.	Min.	Max.	Mean	SE
Snout-vent length (mm)	32	28	31	29.88	0.14
Total length (mm)	32	58	69	64.78	0.49
Inter-limb length (mm)	32	13	16	14.59	0.13
Head length (mm)	32	7.5	8.6	8.02	0.05
Head width (mm)	32	4.6	5.5	5.11	0.04
Mass (g)	32	0.45	0.66	0.56	0.01